

## REMARKS

It is noted with appreciation that claims 12-16 have been indicated to contain allowable subject matter.

Claim 33-37 are rejected under 35 U.S.C. §102 as being anticipated by Vancura, of record, and claims 1-32 and 38-42 are rejected under 35 U.S.C. §103 as being unpatentable over Vancura in view of patent no. 5,836,819 to Ugawa, which is cited for a teaching of an electronic pachinko game. In support of the rejection, the examiner contends that Vancura teaches a method of playing a primary or bonus game in a gaming machine, including establishing a plurality of paths, randomly traversing the paths and awarding the player values associated with the squares landed upon.

A fundamental aspect of applicants' invention is the specific manner in which the display of the simulated movement of an object along a path is generated by the video gaming system. More specifically, applicants' technique involves automatically selecting a set of initial conditions or an origin state in response to activation of an object launch actuator, and then running the set of initial conditions or the origin state through a mathematical model to determine an object path to a final resting condition. The systems disclosed in the cited references do not operate in this manner. In Vancura, the player, in addition to activating the machine, must actively select a path or a path portion and, indeed, that is a fundamental characteristic of the Vancura system. Ugawa does not disclose exactly how its ball paths are generated, but there is no suggestion that it is done by randomly selecting a set of initial conditions or an origin state and running it through a mathematical model of the game.

The examiner contends that in applicants' system, the activation of a launch actuator is a "selection of path" and, therefore, is effectively the same as the system disclosed by Vancura. On the contrary, in Vancura, once the "Start" button is pressed, the player is presented with a

choice of paths which the player must then actively choose among, so that the player controls which path is selected. In applicants' system, on the other hand, the player has no selective control of the object path. Once the object launch actuator is activated, the determination of the path is done completely by the system. In order to clarify this point, each of claims 1, 5, 17, 22, 26 and 38 has been amended to specify that the system operates in response to activation of the object launch actuator for "causing software to randomly select" a set of initial conditions (claims 1, 5 and 38), a path (claims 17 and 26) or an outcome (claim 22). Claim 33 already recites a processor program "including a first routine responsive to a player input for randomly determining an origin state and running it through the model for simulating movement of the object to a final resting condition." Accordingly, it is believed that, as amended, the independent claims and the claims dependent thereon patentably distinguish from the cited art.

Claim 22 and 26 additionally recite a unique approach to determining the set of initial conditions which is to be run through the mathematical game model, viz., first causing the software to "select an outcome based on its probability of occurrence", then "running the selected outcome through the model in reverse to produce a set of initial conditions." The examiner contends that this technique is obvious by reason of the fact that "it is a property of mathematics that equations may be solved for any unknown variable and then re-calculated for checking." But applicants' technique is not simply a case of "checking" a calculation. In the "checking" scenario, one solves for a single unknown variable. In applicants' arrangement, on the other hand, the running of the randomly selected outcome through the model in reverse is a technique for indirectly randomly determining a set of initial conditions. It is possible that any number of different sets of initial conditions could, when run through the model, arrive at the same randomly selected outcome. In the arrangement of the claim 22, instead of directly randomly selecting from a plurality of sets of initial conditions, the random selection is made

indirectly, by starting at an outcome and running it in reverse through the model, and whichever set of initial conditions it arrives at is determined to be the set to be run through the model for display. It is respectfully submitted that there is nothing in the cited art which would render such a technique “obvious.”

Each of claim 17 and 26 additionally specifies a refinement of the path generation technique, wherein there is initially determined “a finite collection of points” on a play field “including a route starting point and at least one route end point” as well as “a finite collection of possible paths of the object from one point to another, such that each point except route end points has one or more paths leading away from it.” The claims then further require that, at each point along a path, a random selection is made among paths leading to or from that point. No such arrangement is disclosed or suggested by the cited art. In Vancura, at each stopping square along a path, the player may activate a random number generator, but that random activation does not select a path, but rather simply selects a distance to move along a player-selected path or path segment. Accordingly, this affords an additional reason for the allowance of claims 17 and 26 and the claims dependent thereon.

In view of the foregoing, it is respectfully submitted that, as amended, each of claims 1-42 is in condition for allowance. Accordingly, reconsideration of the final rejections and allowance of the application are respectfully asked.

Respectfully submitted,

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